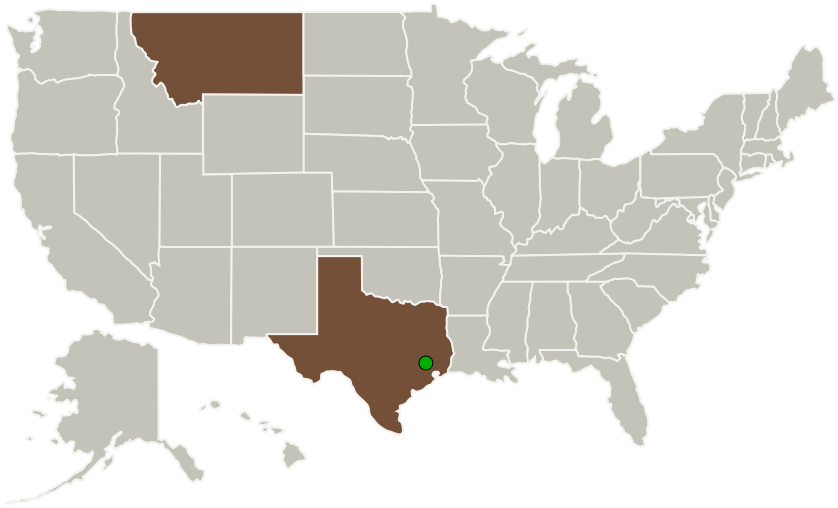
Medical Operations Decision Support System, Phase II

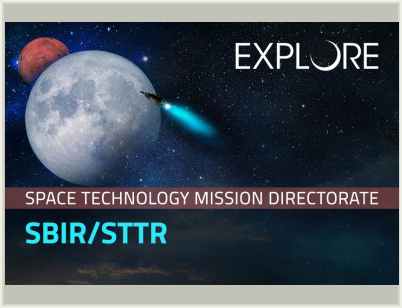
Completed Technology Project (2010 - 2012)

Project Introduction

Risks associated with possible medical events during space missions are challenging to identify and manage. Resources must be applied judiciously and risk must not be ignored. NASA's researchers need the capability to identify the risks that arise from the potential medical events, gather all of the published evidence that is available, analyze the probability and severity of the risks, plan to mitigate the risks, investigate the interdependencies between risks and mitigation strategies, track and control the information, and support informed decisions about risks and risk mitigation strategies. S&K Aerospace (SKA) proposes an innovative Web-based system to support the continuous management of medical risk for future space missions. We propose to provide users with the ability to create and maintain a repository of medical risk information, including information about the probability of the risks and the severity of the outcomes. Users will be able to associate outside data with the risk information to support the decisions made regarding the risks. Users will also be able to plan mitigation strategies for the risks, to plan risk mitigation strategies across multiple missions, and to balance the interactions between risk mitigation strategies on a single mission. A continuous risk management system requires that the risks be re-evaluated as contributing factors change, as additional information is learned about the probabilities and consequences of the risks, and simply as time passes.

Primary U.S. Work Locations and Key Partners





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Organizations Performing Work	Role	Type	Location
S&K Aerospace, Inc.	Lead Organization	Industry Small Disadvantaged Business (SDB)	St Ignatius, Montana
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
Montana	Texas

Project Transitions

February 2010: Project Start

February 2012: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/139204)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

S&K Aerospace, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

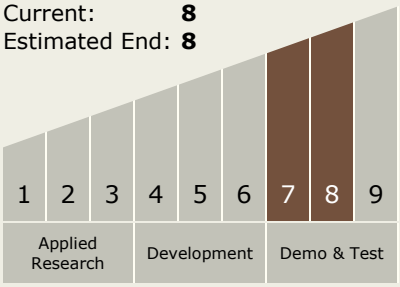
Carlos Torrez

Principal Investigator:

Arthur Molin

Technology Maturity (TRL)

Start: **7**
Current: **8**
Estimated End: **8**



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Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.1 Medical Diagnosis and Prognosis

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System